THURSDAY, FEBRUARY 11, 1875

HANCOCK'S "BIRDS OF NORTHUMBERLAND AND DURHAM"

A Catalogue of the Birds of Northumberland and Durham. By John Hancock. (London: Williams and Norgate. Newcastle-on-Tyne: F. and W. Dodsworth, 1874.)

A STATE of expectancy in which British ornithologists have for some years been living has at length been ended by the appearance of Mr. John Hancock's "Catalogue of the Birds of Northumberland and Durham," which we lose no time in recommending to the notice of such of our readers as are interested in this branch of natural history. It will of course most recommend itself to dwellers in those two counties, but it contains besides much that concerns the lovers of birds everywhere in the British Islands, and its author has our warmest congratulations on the completion of his work in a form so inviting; while the Natural History Society of Northumberland, Durham, and Newcastle-upon-Tyne, and the venerable Tyneside Naturalists' Field Club—at the joint expense of which it is produced—deserve our heartiest thanks for its publication.

Mr. John Hancock has long been known to some who, though comparatively few in number, are perhaps best able to form an opinion, as one of the closest and most careful observers of birds and bird-life in this country. The circle of his admirers would have been indefinitely wider but for the reticence which his natural modesty has for years made him keep. While others without a tithe of his knowledge have ostentatiously come forward as teachers so as to acquire a character as "celebrated ornithologists" out of all proportion to their ability, he has been content to look on, seldom obtruding on the public any of the results of his experience, and then perhaps only at the earnest solicitation of some particular friend. Yet this ornithological oracle of the North of England has never been hard to consult, and the number of those who, through information privately derived from him, have in a manner reaped the fruit of his continual observation—not always, we fear, with due acknowledgment on their part—is not inconsiderable. It is, therefore, with great pleasure that we find he has at last summoned courage to speak for himself. As a consequence of his diffidence, a good deal of what he has to tell us has oozed out through other channels, but there is more than sufficient novelty in the 200 and odd pages of this "Catalogue" amply to repay their study, and even when facts ascertained by him have been announced before, it is most satisfactory to have the record of them here stamped by his personal authority. It will be news, we take it, to most people to learn that Mr. Hancock was the first who recognised Bewick's Swan as a distinct species;* and we cannot but wonder that forty-five years and more have been allowed to elapse before this fact was made publicly known. Yet Mr. Hancock shows not the least trace of annoyance at the way in which his claims have been overlooked—his conduct in this respect being in exemplary contrast to the selfish and utterly unphilosophical squabbling as to "priority" which so often disgraces the votaries of all sciences. To him it is enough that a discovery was made; if important, so much the better; but, so long as knowledge has been extended, it matters nothing by whose means the end was attained. If we have not here a practical illustration of true scientific spirit, it will be difficult to meet with it anywhere.

We are therefore somewhat at a loss how to treat the work of a man so indifferent to what is called by the vulgar "fame." To pick out and here recount the various discoveries which, whether before announced or not, are due to Mr. Hancock, would be to set at nought the example given by his preaching and practice. The discrimination of the Iceland and Greenland Falcons, a question that has agitated ornithologists both here and on the Continent in no common degree, was first settled by Mr. Hancock in 1854. Yet to him the chief value of the discovery seems to be that it enables him to lay down the general law:—

> "Not only do all the noble or true falcons acquire their adult plumage in the first moult, but many of the ignoble species do so likewise, as the Honey Buzzard, the Goshawk, the Sparrow-hawk, and the Harriers. This fact cannot be too strongly pressed on the attention of ornithologists, for it leads to a correct understanding of the variations of the plumage of the *Falconidæ*." (P. 10.)

This is no mere *dictum*, but the result of long-continued observation; and well indeed would it be were writers, who have very recently attempted to deal with this subject, to learn as Mr. Hancock has done, in Dame Nature's simple school, instead of perpetuating error and confusion by grandly setting forth their unsound and arbitrary views on the "first year's," "second year's," and "third year's" plumage of birds of prey.

The work before us is most strictly what its title professes, a "Catalogue," and does not pretend to give a complete history of the birds found in the two counties; in other words, to be a "Fauna" of the class. But it is a catalogue conceived in no narrow spirit, for the author, as the extract just given shows, is on occasion not averse to add remarks having a very general bearing. To few of these will our space allow us to call attention, but we must especially notice the valuable "Introduction," wherein, after briefly touching upon former lists of the birds of the district, and comparing, not without some justifiable pride, its ornithological wealth (265 species) with that of Norfolk (280 or 290 species)—the richest county in this respect of the whole United Kingdom—Mr. Hancock gives an admirable account of the physical features of Northumberland and Durham. Concise as it is, we cannot here reproduce it: we must leave it to our readers, and only extract a few passages:—

> "Our extensive seaboard lies in the direct line of the annual migrations to and from the northern latitudes, and is well fitted to the requirements of many species of sea-fowl. The coast in many parts is bold and rocky, but is agreeably varied with beautiful sandy beaches of vast extent, backed with wild hummocky 'links,' and not unfrequently with belts of bog and pools of sedgy water. There is also no want of muddy flats or estuaries, though these features are fast disappearing under the necessities of commerce.
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> "The northern and western portions of the counties are

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* This he did in *January* 1829. Pallas had described it as a variety in 1811, and it was not till *November* 1829 that Yarrell announced himself satisfied that it was anything else.

> wild and hilly. The Cheviot range attains an elevation of 2,658 feet, and this, along with that of Simonside, gives quite a sub-alpine character to this portion of the country. In these uplands, the Eagle and Peregrine Falcon formerly had their abode. . . . The western part of Durham is also wild, moory, and mountainous, but of less elevation. These wild regions are characterised by vast tracts of grass land, in some places fine, in others coarse, boggy, and hummocky; and by extensive moors of heath, gorse, and bracken, with swamps, mosses, tarns, and lochs. . . . Numerous lively streams in pebbly beds, and whimpering rills, diversified with little lippering cascades, abound; some almost concealed under the scrubby foliage of their banks, others fully revealed and sparkling over their stony channels. . . .
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> "The cultivated regions are in some places well wooded, and the fields are mostly divided by thorn hedgerows, giving at once beauty to the landscape and shelter to the more delicate tribes of the *Passeres*. But such, particularly the warblers, find their haunts in our numerous wooded dells, or 'denes,' which abound in both counties, and by the shrubby banks of our burns or streamlets. Here the hawthorn, the blackthorn, the wild rose, and bramble, and undergrowths of all kinds, afford to these delicate songsters the shelter and seclusion they require. These 'denes,' of which Castle Eden Dene is a fine example, are frequently well timbered, deep, and have a stream running through them. The principal rivers, the Tyne, the Coquet, and the Wear, not to mention the bordering streams, the Tweed and the Tees, run through deep wide valleys, with, in many parts, well-wooded banks, affording likewise favourite homes for many feathered tribes. Besides such localities, there is no want of extensive woods dispersed throughout the counties, and well-wooded park grounds." (*Introduction*, pp. vii. viii.)

Some two or three localities, on account of their ornithological features, obtain special mention by Mr. Hancock. First of these is the well-known cluster of the Farne Islands, where in a limited area no less than fifteen species of sea-fowls breed. We would willingly recall the recollections of our first visit, nearly a quarter of a century since, to that sea-girt paradise, by transcribing Mr. Hancock's description of its charms, but the exigencies of space are not to be overruled, and we can only pay a tribute to the memory of the late Archdeacon Thorpe, who for so many years, ere Bird-Preservation Acts of Parliament were dreamt of, from proud Bamborough's tower threw the ægis of protection over his feathered tenants on the distant Farnes. No such thoughtful guardian had Jarrow Slake or Dobham Shelf. The encroachments of the engineer have almost destroyed the former as a *statio gratissima mergis*, and probably not a single Teesmouth gunner has even a memory of the latter, though two hundred years since it entertained "an infynite number of sea-fowle which laye theyr Egges heere and there scatteringlie in such sorte, that in Tyme of breedinge one can hardly sett his Foote so warylye that he spoyle not many of theyr nests." Past also are the glories of another spot, though they continued much later. Hear Mr. Hancock:—

> "But no locality in the North of England had such interest for the naturalist as Prestwick Car. The botanist, the entomologist, the conchologist, and the ornithologist, were all equally interested in this one of nature's most famous nurseries. Here the naturalists of the district had resorted for several generations to collect the objects of their respective studies. . . . It is an area depressed, as if by subsidence, of about 1,100 acres, and is of a rounded or subquadrangular form, about two miles in diameter; and the surrounding land is little elevated. The greater or central portion is (or rather was, for it is now all changed) composed of peat, more or less covered with a growth of ling and heather, and of boggy, hummocky, coarse grass land; this central portion was surrounded by a belt of good pasture land varied with gorse or 'whin.' Towards the north and west boundaries there was a chain of pools, the largest and most important of which was called the Black Pool; towards the south extended another chain of pools, among which was the Moor-spot Pool. The Black Pool could not be less than a mile in length, and was of considerable width. There were three islands in it, two towards the east, and one towards the west end. The drainage was through this sheet of water, from which there was a cut, or open ditch, to the River Pont; but the fall was so slight that the drainage was very incomplete, and the water flowed backwards and forwards in accordance with the state of the river. These pools were on a peaty bottom, in which the remains of numerous trees, chiefly Scotch fir and birch, stood erect, and firmly rooted. They were not visible above the surface of the water, though in droughty seasons numbers of them were frequently exposed near the margins of the pools. The trees were of no great size, and in most instances the wood was in such a good state of preservation, and contained so much resin, that it was used by the neighbouring villagers for firewood." (Pp. xii. xiii.)

This priceless nursery of plants and animals and delicious recreation-ground of naturalists was drained in 1857, and with its disappearance vanished many of its frequenters. "The birds that congregated there have been dispersed, and several that had on account of their breeding in that place ranked as residents, have now become mere visitants." Its destruction, therefore, has not failed materially to affect the ornithology of the district. Hence Mr. Hancock is led to remark on the wholesale extermination of some species, and in one point at least, that of the birds of prey, what he says merits every attention:—

> "This policy of the game-preserver is of questionable utility in promoting the increase of game; nor does it appear that much has been achieved in this respect, for, after some inquiry, I cannot ascertain that either partridges or grouse are more numerous than they were some years ago when birds of prey were yet to be seen on the wing." They are not, he continues, "an unmitigated evil; they are a necessary part of the great scheme of nature, and may be essential to the perfectly healthy development of the birds they feed upon. It is undoubtedly advantageous that the feebly organised and sickly individuals should be weeded out, and this is done by birds of prey. We have of late years heard much about stamping out epidemics among mankind. It is a function of the Peregrine and its congeners to assist in stamping out epidemics among game-birds." (Pp. xviii. xix.)

Mr. Hancock has some hard and well-deserved strictures on the Wild Birds Preservation Act of 1872, which he rightly says shows the ignorance of those who drew up its schedule; but he does not seem fully to comprehend some of the practical difficulties attending any such measure. He complains that some species "stand in it under two, three, or even four different names," overlooking the fact that in different parts of the country certain species are known only by one particular and often very local name, so that if that name was omitted it would in such cases be impossible to obtain a conviction under the provisions of the Act. He also laments that some species, "the greatest favourites of the public," are excluded from its protection; but we may ask, is there any good ground for supposing that they require it?

There are a few other points in which we should be disposed, had we room, to discuss some of Mr. Hancock's opinions—but at all times with the greatest respect, for such is justly due to his authority. His assertion, for instance, as to the amount of variability in Cuckoos' eggs (p. 25) will hardly change the mind of those who have seen long series of specimens from Germany or other countries, or recollect the evidence of foreign ornithologists adduced some years ago in these pages (NATURE, vol. i. p. 266). Nor is it by any means certain that *all* birds "do not discriminate nicely the colours or other characters of their eggs." None of the examples he quotes to that effect are of kinds which act as foster-parents to the Cuckoo, and their case therefore can hardly be said to apply to "the theory of Dr. Baldamus." Again, too, we must remark that Mr. Hancock must have been exceptionally unfortunate in performing the experiments of Herr Meves to explain the "bleating" or humming of the Snipe. The late Mr. Wolley put on record his acquiescence in their satisfactory nature (Proc. Zool. Soc. 1858, p. 201), and a more competent witness could not be easily found, especially when we consider that his evidence was given after he was acquainted with the extraordinary and entirely different noise made by the smaller species of Snipe which has not stiff *rectrices*. We must therefore demur to Mr. Hancock's statement that "the neighing or bleating of the Snipe results from the action of the wings, and that any sound produced by the tail-feathers is inaudible."

It remains for us to notice the plates, fourteen in number, by which this work is embellished. All of them are characteristic, and most of them excellent; a fact especially to be noticed, since they are chiefly designed from birds stuffed and mounted by Mr. Hancock. Yet most of us who are old enough to remember his beautiful contributions to the Great Exhibition of 1851, to say nothing of specimens of his skill which we may have since seen elsewhere, have therein no cause for surprise. In the art of taxidermy—for art it is with him in a high sense—Mr. Hancock has no equal now, and possibly never had but one, the late Mr Waterton; and the difference between specimens mounted as these are and the handiwork of ordinary bird-stuffers is apparent to anyone who has an eye for a bird. Whether Mr. Hancock's genius in this respect is innate, or whether it has been developed in him from a study of his fellow-townsman Bewick's labours, matters not much; both artists may be rated equally high as delineators of birds, while the younger one, as the pages of this publication prove, stands as a naturalist immeasurably above the elder.

OUR BOOK SHELF

Notes of Demonstrations on Physiological Chemistry. By S. W. Moore, F.C.S., &c. (London: Smith, Elder, and Co., 1874.)

THE Preface to the "Notes of Demonstrations on Physiological Chemistry" states "the want felt by the average medical student, viz., hints as to which are the most important points in practical work which he can be expected to acquire," and "the impossibility for a class of men with only three hours a week at its disposal for practical work to go through lengthy and uninteresting processes," induced the author to compile the "Notes," "so arranging them as to show the student methods that more nearly concern his immediate and future requirements." In other words, the book is not intended to treat thoroughly of any part of physiological chemistry, but only to remind the student of the principal points on which he is likely to be questioned, and to refer him for further information to the College Demonstration. To place a book of this kind in the hands of the medical student cannot be productive of good, as it enables him to acquire a pretence of knowledge that is, in his case especially, worse than the want of it. No one will deny it to be the duty of the teacher to confine the attention of students to those matters he regards as essential, and to pass over lightly those of less importance. But what will be the result if every teacher writes a book pointing out his mode of treating the subject? The effect will be to educate one-sided men, and to stifle all craving for further information. The only way to avoid this catastrophe is to recommend the use of a really good book, so that the student may acquaint himself with any part of the subject, or confine his attention solely to those points treated by the lecturer. The present work may be very useful to the author's pupils, but we cannot commend it as a satisfactory introduction to the subject of physiological chemistry.

The Microscope and its Revelations. By W. B. Carpenter, M.D., F.R.S. Fifth Edition. (London: J. and A. Churchill, 1874)

THE recent excellent investigations of Mr. Wenham, Col. Woodward, and others, on the optical principles of microscope construction and manipulation, together with the results obtained by the employment of immersion objectives, have added so much to our knowledge of the principles of minute investigation and the interpretation of the results obtained, that any standard work on "The Microscope" must necessarily require fresh editing. In the fifth edition, just published, of his well-known work on the subject, Dr. Carpenter shows how well he has kept pace with modern investigations. In it we find the most recent views on the nature of the markings on Diatoms fully entered into, the opinions of Col. Woodward, Mr. Stoddard, and Mr. Rylands, being clearly stated and criticised. The much discussed new principles and methods proposed by Dr. Royston-Piggott are in no wise omitted, the general tenour of the comments on their value being rather in their favour than otherwise. This last-mentioned subject the author has placed in the hands of Mr. H. J. Slack, the secretary to the Microscopical Society. In looking at the book as a whole, the question which we cannot help asking is, what is the limit to the points which should be touched upon in it? Why should certain tissues be described, and not others? Why should the organisation of some minute animals be entered into, while others are not referred to? We cannot answer this question ourselves, and think it will become more difficult to do so as every fresh fact in histology and minute zoology is added to the considerable mass already at our disposal.

Ueber Algebraische Raumcurven. Von Eduard Weyr.—*Ueber die Steiner'schen Polygone auf einer curve dritter Ordnung C^3 und damit zusammenhängende Sätze aus der Geometrie der Lage.* Von Prof. Karl Küpper.—*Die Lemniscate in Razionaler Behandlung.* Von Dr. Emil Weyr. (Prag, 1873.)

THE first memoir (27 pp.) treats of curves in space, and then discusses special space-curves, viz., those of the fifth order, concluding with the consideration of curves of the sixth order and second and third class. Reference is made to Prof. Cayley's papers on the subject in the *Comptes Rendus*, tome liv. (1862).